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# Physics Abstracts

**Science Abstracts Series A**  
**July–December 1985**

**Subject Index (M – Z)**

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The Institution of Electrical Engineers



## SIX-MONTHLY INDEXES TO PHYSICS ABSTRACTS

Twice a year as part of their subscription to Physics Abstracts, subscribers receive cumulative indexes for the periods January-June and July-December. Each index is in two parts—a Subject Index, and an Author Index which comprises personal and corporate author indexes, and indexes to conferences, book titles, and bibliographies. The List of Journals and other Serial Sources abstracted by INSPEC is also included with the July-December issue of the Author Index, while the supplement to that List is included with the January-June issue.

Cumulative indexes for earlier years are also available: for details please see the inside back cover.

### Subject index

The Subject index provides an alphabetical subject key to the articles included in the abstracts journal. Some general guidance on its use is given below:

1. Look in the index for the name of the specific subject in which you are interested. In most cases this name will be a heading in the index and you will find relevant articles listed under it. The majority of the subject headings fall into the following categories: property, phenomenon, substance or named objects, instrument, device, theory, method, process, application, event.
2. Occasionally you will be directed from the subject heading chosen to a different heading under which the relevant or additional articles are listed.
3. If you do not find the subject heading you first chose, try a more general heading.
4. Each entry under the heading relates to an article appearing in the abstracts journal and gives the serial number of that article in the journal preceded by the last digit of the current year, e.g. 5-12345; i.e. Abstract number 12345 in the abstracts journal for 1985.

The language of the article, if it is not in English, is also indicated. e.g. LABTA/AI acoustic intensity analysis package, appl. (Japanese) 5-26569.

Each entry starts with a Keyword or Keyphrase considered to be most relevant to the heading. On sorting these Keywords, the qualifying prefixes are usually ignored. (e.g.  $\alpha$ -brass, 5-sulphosalicylic, 31 Cygni, n-Ge are sorted under brass, sulphosalicylic, Cygni, Ge respectively).

There are three main Keyword lists: alphabetical A-Z, elementary particles, and chemical symbols (organic substances are written and not given as chemical formula). More than one Keyword list may be present under each subject heading.

For document on, say, 'photoemission of germanium' at least two access points 'photoemission' and 'germanium' are provided. Under the heading 'photoemission' the Keyword will be 'Ge' and under 'germanium' the Keyword will be 'photoemission'.

In a case like this, it is advisable and quicker to use the heading 'photoemission' and go straight to the chemical symbol list for 'Ge'.

Intermetallic compounds are indexed under the appropriate alloy headings. The chemical formula is used as Keyword. However, it is important to realise in searching the chemical symbol list that, at present, alloys and intermetallic compounds are sorted separately. For example FeCo is sorted at the end of the Fe- list e.g. Fe-Al,... Fe-Co,... Fe-Si,... Fe-Si-B,... FeCo,... FeSi and so on in this order.

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Abbreviations and acronyms are used in the references in this PSC Guide to indicate specific indexed individual items should be readily understood. A list of the abbreviations and acronyms used in the references is given by their chemical formulae, and the abbreviations and acronyms used in the formulae are given by their element, e.g.  $\text{H}_2\text{O}$  and  $\text{H}_2\text{O}_2$  appear in the formulae as  $\text{H}_2\text{O}$  and  $\text{H}_2\text{O}_2$  respectively. Organic substances including liquid crystals are given by their names and abbreviations are used.

# Physics Abstracts

Science Abstracts Series A

July – December 1985

## Subject Index (M – Z)

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# Abbreviations and Acronyms

Abbreviations and acronyms are used in the modifiers in all INSPEC Cumulative Subject Indexes. Individual terms should be readily understood in the context of the subject headings. **Inorganic substances** are usually given by their chemical formulae. Iron and aluminium garnets appear in the formulae lists as MIG and MAG (where M is metal element, e.g. YIG and YAG); (Pb,La)(Zr,Ti)O<sub>3</sub> and Pb(Zr,Ti)O<sub>3</sub> appear as PLZT and PZT. **Organic substances** including **liquid crystals** are not given as formulae but common abbreviations are used.

|           |   |                  |  |
|-----------|---|------------------|--|
| 1D        | one-dimensional   | AWGN             | additive white Gaussian noise                            |
| 2D        | two-dimensional   |                  |  |
| 3D        | three-dimensional                                       | BARITT           | barrier injection transit time                           |
| A/D       | analogue-to-digital                                     | BBD              | bucket-brigade device                                    |
| ABS resin | acrylonitrile-butadiene-styrene resin                   | BBEA             | 4-butoxybenzal-4'-ethylaniline                           |
| AC        | alternating current                                     | BBGKY            | Bogoliubov-Born-Green-Kirkwood-Yvon                      |
| ACV       | air cushion vehicle                                     |                  |  |
| ADC       | analogue-to-digital conversion                          | BCC              | body centred cubic                                       |
| ADM       | adaptive delta modulation                               | BCD              | binary-coded decimal                                     |
| ADP       | administrative data processing                          | BCH              | Bose-Chadhuri-Hocquenghem                                |
| ADPCM     | adaptive differential pulse code modulation             | BCS              | Bardeen-Cooper-Schrieffer                                |
|           |   | BCT              | body centred tetragonal                                  |
| AE        | acoustic emission                                       | BEBC             | Big European Bubble Chamber                              |
| AEC       | atomic electron correlation(s)                          | BEM              | boundary element method                                  |
| AES       | Auger electron spectra(oscopy)                          | BEPC             | Beijing Electron Positron Collider                       |
| AF        | audio frequency   | BER              | bit error rate   |
| AFC       | automatic frequency control                             | BFL              | buffered FET logic                                       |
| AFL       | abstract family of languages                            | BFO              | beat-frequency oscillator                                |
| AFMR      | antiferromagnetic resonance                             | BH               | buried heterostructure                                   |
| AFR       | away from reactor (spent fuel storage)                  | BIL              | buried injection logic                                   |
|           |   | BIMOS            | bipolar/metal-oxide-semiconductor                        |
| AGC       | automatic gain control                                  | BPSK             | binary phase shift keying                                |
| AGR       | advanced gas-cooled reactor                             | BRD              | W Germany  |
| AGS       | alternating gradient synchrotron                        | BRET             | Breeder Reprocessing Engineering Test                    |
| AGV       | automatic guided vehicle                                |                  |  |
| AI        | artificial intelligence                                 | BVP              | boundary value problem                                   |
| ALARA     | as low as reasonably achievable                         | BWIP             | Basalt Waste Isolation Project                           |
| ALU       | arithmetic logic unit                                   | BWO              | backward wave oscillator                                 |
| AM        | amplitude modulation or air mass number                 | BWR              | boiling water reactor                                    |
|           |   | BWT              | backward wave tube                                       |
| ANOVA     | analysis of variance                                    |                  |  |
| APACHE    | Accelerator for Physics and Chemistry of Heavy Elements | C-V              | capacitance-voltage                                      |
| APC       | adaptive predictive coding                              | C <sup>2</sup>   | command and control                                      |
| APCM      | adaptive pulse code modulation                          | C <sup>3</sup>   | command control communications or cleaved coupled cavity |
| APCVD     | atmospheric pressure chemical vapour deposition         | C <sup>3</sup> I | command control communications and intelligence          |
| APD       | avalanche photodiode                                    | C <sup>3</sup> L | complementary constant current logic                     |
| APR       | acoustic paramagnetic resonance                         | CAD              | computer aided design                                    |
| APRFR     | Army Pulsed Radiation Facility Reactor                  | CADD             | computer aided draughting and design                     |
| APS       | appearance potential spectra(oscopy)                    | CAE              | computer aided engineering                               |
| APW       | augmented plane wave                                    | CAI              | computer assisted instruction                            |
| ARMA      | autoregressive moving average                           | CAM              | computer aided manufacturing                             |
| ARQ       | automatic repeat request                                | CANDU            | Canadian deuterium uranium                               |
| ARUPS     | angular resolved ultraviolet photoelectron spectra      | CAR              | computer aided retrieval                                 |
|           |   | CARS             | coherent antiStokes Raman scattering (spectra)           |
| ASCII     | American standard code for information interchange      | CATT             | controlled avalanche transit transistor                  |
| ASK       | amplitude shift keying                                  | CATV             | community antenna television or cable television         |
| ATC       | air traffic control                                     |                  |  |
| ATE       | automatic test equipment                                | CB               | citizens' band   |
| ATF       | Advanced Toroidal Facility                              | CBI              | computer based instruction                               |
| ATM       | automatic teller machine or Axilrod-Teller-Moto         | CBOOA            | cyanobenzylidene octyloxylaniline                        |
|           |   | CBT              | computer based training                                  |
| ATR       | attenuated total reflection                             | CCBA             | coupled channel Born approximation                       |
| ATWS      | anticipated transients without scram                    | CCFL             | counter current flow limiting (LOCA phenomenon)          |
| AVC       | automatic volume control                                |                  |  |



|        |  |         |   |
|--------|--|---------|---|
| CCD    | charge-coupled device  | CRBR    | Clinch River Breeder Reactor project                    |
| CCIR   | International Radio Consultative Committee                         | CRDA    | control rod drop accident                               |
| CCITT  | International Telephone & Telegraph Consultative Committee         | CRO     | cathode ray oscilloscope                                |
| CCL    | capacitor-coupled logic  | CRSR    | coherent resonant Stokes rotation                       |
| CCTF   | Cylindrical Core Test Facility                                     | CRT     | cathode ray tube  |
| CCTR   | Culham Conceptual Tokamak Reactor                                  | CS      | coupled states  |
| CCTV   | closed circuit television  | CSM     | continuous slowing down models                          |
| CD     | compact disc   | CSMA    | carrier sense multiple access                           |
| CD-ROM | compact disc ROM   | CSMA/CD | carrier sense multiple access with collision detection  |
| CDFR   | Commercial Demonstration Fast Reactor                              | CSP     | channel substrate planar                                |
| CDI    | collector diffusion isolation                                      | CSRS    | coherent Stokes-Raman spectra(oscopy)                   |
| CDM    | code division multiplexing   | CSSB/AM | companded single sideband amplitude modulation          |
| CDMA   | code division multiple access                                      | CT      | computerised tomography                                 |
| CDW    | charge-density wave  | CTD     | charge transfer device                                  |
| CECL   | cascode-emitter coupled logic                                      | CTL     | complementary-transistor logic                          |
| CEGB   | Central Electricity Generating Board                               | CTR     | controlled thermonuclear reactor                        |
| CEM    | channel electron multiplier  | CVD     | chemical vapour deposition                              |
| CEPA   | coupled electron pair approximation                                | CVSDM   | continuously variable slope delta modulation            |
| CERN   | Conseil Européen pour la Recherche Nucléaire                       | CW      | continuous wave   |
| CESR   | conduction electron spin resonance                                 | D/A     | digital-to-analogue                                     |
| CFG    | context free grammar   | DAC     | digital-to-analogue conversion                          |
| CFL    | context free language  | DAD     | digital audio disc                                      |
| CFSK   | coherent frequency shift keying                                    | DAMA    | demand assigned multiple access                         |
| CGTO   | contracted Gaussian-type orbital                                   | DASD    | direct access storage device                            |
| CHF    | coupled Hartree-Fock   | DBMS    | database management system                              |
| CI     | configuration interaction  | DBR     | distributed Bragg reflector                             |
| CID    | charge injection device  | DBS     | direct broadcasting by satellite                        |
| CIDEP  | chemically induced dynamical electron polarisation                 | DC      | direct current  |
| CIDNP  | chemically induced dynamical nuclear polarisation                  | DCFL    | direct-coupled FET logic                                |
| CIEH   | charge iterated extended Huckel                                    | DCLC    | drift cyclotron loss cone (instability)                 |
| CIHY   | configuration interaction Hylleras                                 | DCTL    | direct-coupled transistor logic                         |
| CIM    | computer integrated manufacturing or constituent interchange model | DDC     | direct digital control                                  |
| CMI    | computer managed instruction                                       | DDL     | diode-diode logic                                       |
| CML    | current-mode logic   | DDR     | E Germany   |
| CMOS   | complementary metal oxide semiconductor                            | DECENT  | distribution of exact classical energy transfer         |
| CNC    | computerised numerical control                                     | DESY    | Deutsches Electron Synchrotron                          |
| CNDO   | complete neglect of differential overlap                           | DF      | Dirac-Fock  |
| COC    | cholesteryl oleyl carbonate  | DFB     | distributed feedback                                    |
| COM    | computer output to microform (fiche or film)                       | DFE     | decision feedback equaliser                             |
| COMFET | conductivity-modulated field effect transistor                     | DFT     | discrete Fourier transform                              |
| COOB   | 4,4'-cyano-octyloxy-biphenyl                                       | DH      | double heterostructure                                  |
| COVA   | computer code validation   | DIL     | dual-in-line  |
| CP     | charge, parity   | DIP     | dual in-line package                                    |
| CPA    | coherent potential approximation or critical path analysis         | DITE    | Divertor in Torus Experiment                            |
| CPFSK  | continuous phase frequency shift keying                            | DLTS    | deep level transient spectra(oscopy)                    |
| CPM    | continuous phase modulation or critical path method                | DM      | delta modulation  |
| CPSK   | coherent phase shift keying  | DMA     | direct memory access                                    |
| CPT    | charge, parity, time   | DMM     | digital multimeter                                      |
| CPU    | central processing unit  | DMOS    | double-diffused metal-oxide-semiconductor               |
|        |  | DMSO    | dimethylsulphoxide                                      |
|        |  | DNA     | digital network architecture or deoxyribonucleic acid   |
|        |  | DNMR    | double nuclear magnetic resonance                       |
|        |  | DOBAMBC | p-decyloxybenzylidene p'-amino 2-methyl butyl cinnamate |
|        |  | DoD     | Department of Defense (USA)                             |
|        |  | DOPSK   | differential offset phase shift keying                  |



|                     |   |       |   |
|---------------------|---|-------|---|
| DORIS               | Dopple-Ring-Speicher                                | EFM   | extended Flygare method   |
| DOS                 | disc operating system                               | EFT   | electronic funds transfer   |
| DOVETT              | double velocity transit time                        | EHD   | electrohydrodynamics  |
| DP                  | data processing                                     | EHF   | extremely high frequency  |
| DPCM                | differential pulse code modulation                  | EHP   | electron-hole potential method  |
| DPDA                | deterministic pushdown automaton                    | EHT   | extra high tension or extended  |
| DPPH                | diphenylpicrylhydrazyl                              |       | Huckel theory   |
| DPSK                | differential phase shift keying                     | EHV   | extra high voltage  |
| DQPSK               | differential quadrature phase shift keying          | EIRP  | equivalent isotropically radiated power   |
| DRAM                | dynamic random access memory                        | ELDOR | electron electron double resonance  |
| DS-SSMA             | direct sequence-spread spectrum multiple access     | ELF   | extremely low frequency   |
| DSAM                | Doppler shift attenuation method                    | EM    | electromagnetic   |
| DSB                 | double sideband                                     | EMC   | electromagnetic compatibility or  |
| DSC                 | differential scanning calorimetry                   |       | European Muon Collaboration   |
| DSI                 | digital speech interpolation                        | EMF   | electromotive force   |
| DSP                 | digital signal processor                            | EMG   | electromyography (-gram)  |
| DSS                 | decision support system                             | EMI   | electromagnetic interference  |
| DTA                 | differential thermal analysis                       | EMP   | electromagnetic pulse   |
| DTL                 | diode transistor logic                              | ENDOR | electron nuclear double resonance   |
| DTPP                | Demonstration Tokamak Power Plant                   | ENG   | electronic newsgathering  |
| DTU                 | dual topological unitarisation                      | EOF   | end of file   |
| DV-X $\alpha$       | discrete variational X $\alpha$ method              | EPEN  | empirical potential energy function based on interactions of electrons and nuclei |
| DVM                 | digital voltmeter                                   |       |   |
| DWBA                | distorted wave Born approximation                   | EPMA  | electron probe microanalysis  |
| DWIA                | distorted wave impulse approximation                | EPR   | electron paramagnetic resonance   |
|                     |   | EPRI  | Electric Power Research Institute   |
| E1,E2               | electric dipole, quadrupole                         | EPROM | erasable programmable read-only-memory  |
| E <sup>2</sup> PROM | electrically erasable programmable read-only-memory | ERG   | electroretinography (-gram)   |
| EAROM               | electrically alterable read-only-memory             | ESA   | European Space Agency   |
| EAS                 | extensive air shower                                | ESCA  | electron spectroscopy for chemical analysis                                       |
| EAX                 | electronic automatic exchange                       | ESCAR | Experimental Superconducting Accelerating Ring                                    |
| EB                  | exponential Born                                    | ESD   | electrostatic discharge or electron stimulated desorption                         |
| EBBA                | 4-ethoxybenzylidene-4'-n-butylaniline               | ESF   | engineered safety features  |
| EBIC                | electron beam induced current(s)                    | ESFI  | epitaxial silicon film on insulator   |
| EBR                 | experimental breeder reactor                        | ESS   | electronic switching system   |
| EBT                 | Elmo Bumpy Torus                                    | EUV   | extreme ultraviolet   |
| ECC                 | emergency core cooling                              | EW    | electronic warfare  |
| ECCM                | electronic counter-counter measures                 | EX-OR | exclusive-OR (logic)  |
| ECCS                | emergency core cooling system                       | EXAFS | extended X-ray absorption fine structure  |
| ECELR               | Epithermal Critical Experiment Laboratory Reactor   |       |   |
| ECG                 | electrocardiography (-gram)                         | FAMOS | floating gate avalanche metal-oxide-semiconductor                                 |
| ECL                 | emitter coupled logic                               | FBR   | fast breeder reactor  |
| ECM                 | electronic countermeasures                          | FCC   | face centred cubic  |
| ECRH                | electron cyclotron resonance heating                | FCI   | fuel coolant interaction  |
| EDA                 | ethylene diamine                                    | FDM   | frequency division multiplex(ing)   |
| EDAX                | energy dispersive X-ray analysis                    | FDMA  | frequency division multiple access  |
| EDP                 | electronic data processing                          | FDNC  | frequency dependent negative conductance  |
| EDTA                | ethylene diamine tetra-acetic acid                  | FDNR  | frequency dependent negative resistance   |
| EDW                 | electron density wave                               | FECL  | feedback ECL  |
| EDX                 | energy dispersive X-ray                             | FED   | Fusion Engineering Device (USA)   |
| EEBAC               | ethyl-4-(4'-ethoxy-benzylidene-amino) cinnamate     | FEDC  | Fusion Engineering Device Centre  |
| EEG                 | electroencephalography (-gram)                      | FEM   | field emission microscopy or finite element method                                |
| EELS                | electron energy loss spectra(scopy)                 | FER   | Fusion Experimental Reactor (Japan)   |
| EEPROM              | electrically erasable programmable read-only-memory |       |   |
| EFG                 | edge-defined film fed growth                        |       |   |
| EFL                 | emitter-follower logic or emitter-function logic    |       |   |



|           |   |                  |   |
|-----------|---|------------------|---|
| FET       | field effect transistor   | HCP              | hexagonal close packed                            |
| FFHR      | fusion-fission hybrid reactor                                       | HDLC             | high level data link control                      |
| FFT       | fast Fourier transform  | HDTV             | high definition television                        |
| FFTF      | Fast Flux Test Facility   | HEED             | high energy electron diffraction                  |
| FHNC      | Fermi hypernetted chain   | HEMP             | high altitude electromagnetic pulse               |
| FIFO      | first in first out  | HEMT             | high electron mobility transistor                 |
| FIM       | field ion microscopy  | HEU              | highly enriched uranium (93% U235)                |
| FIMOS     | floating gate ionisation injection metal-oxide-semiconductor        | HEU/Th           | highly enriched U/Th fuel                         |
| FIR       | far infrared or finite impulse response                             | HEXFET           | hexagonal MOSFET                                  |
| FLIR      | forward looking infra-red   | HF               | high frequency or Hartree-Fock                    |
| FM        | frequency modulation  | HFB              | Hartree-Fock-Bogoliubov                           |
| FMIT      | Fusion Materials Irradiation Test Facility                          | HFEF             | Hot Fuel Examination Facility                     |
| FMR       | ferromagnetic resonance   | HFIR             | high flux isotope reactor                         |
| FMS       | flexible manufacturing systems                                      | HFITR            | High Field Ignition Test Reactor                  |
| FMSR      | Fast Mixed Spectrum Reactor   | HFO              | Hartree-Fock-Overhauser                           |
| FPC       | fusion power core   | HFS              | Hartree-Fock-Slater or hyperfine structure        |
| FPLA      | field programmable logic array                                      | HGMS             | high gradient magnetic separation                 |
| FPT       | finite perturbation theory  | HIXE             | heavy ion induced X-ray emission                  |
| FRMR      | field reversed mirror reactor                                       | HJBT             | heterojunction bipolar transistor                 |
| FSDE      | fission suppressed direct enrichment (breeder blanket)              | HJFET            | heterojunction field effect transistor            |
| FSK       | frequency-shift keying  | HLL              | high level language                               |
| FSGO      | floating spherical Gaussian orbitals                                | HLLW             | high level liquid waste                           |
| FTR       | Fast Test Reactor   | HLW              | high level waste                                  |
| FWHM      | full width half maximum   | HMO              | Huckel molecular orbitals                         |
|           |   | HMOS             | high-performance metal-oxide-semiconductor        |
| GAMBIT    | gate modulated bipolar transistor                                   | HMTSeF           | hexamethylenetetraselenafulvalene (-inium)        |
| GANIL     | Grand Accelérateur National a Ions Lourds                           | HMTTF            | hexamethyltetrathiofulvalene (-inium)             |
| GCFR      | gas-cooled fast breeder reactor                                     | HOAB             | heptyloxyazoxybenzene                             |
| GCHWR     | gas cooled heavy water moderated reactor                            | HOBHA            | p-n-heptyloxy-benzylidene-p-n-heptylaniline       |
| GCM       | generator coordinate method   | HOMO             | highest occupied molecular orbitals               |
| GDR       | giant dipole resonance  | HSLA             | high strength low alloy (steel)                   |
| GETR      | General Electric Test Reactor                                       | HT               | high tension                                      |
| GHF-NO-CI | generalised Hartree-Fock/natural orbital/configuration interactions | HTGR             | high temperature gas-cooled reactor               |
| GIAO      | gauge-invariant atomic orbitals                                     | HTGR SC/C        | HTGR steam cycle cogeneration                     |
| GKS       | Graphical Kernel System   | HV               | high voltage                                      |
| GMR       | giant monopole resonance  | HVAC             | heating, ventilation and air conditioning         |
| GO        | Gaussian orbitals   | HVDC             | high voltage direct current                       |
| GOO       | generalised Overhauser orbitals                                     | HVEM             | high voltage electron microscopy                  |
| GPED      | gas phase electron diffraction                                      | HWLWR            | heavy water moderated light water cooled reactor  |
| GPIB      | general purpose interface bus                                       | HWR              | heavy water reactor                               |
| GPM       | ground potential model  | HZP              | Hot Zero Power                                    |
| GPS       | Global Positioning System   |                  |   |
| GQR       | giant quadrupole resonance  | I-V              | current-voltage                                   |
| GRIN      | graded (gradient) refractive index                                  | I/O              | input/output                                      |
| GSPC      | gas scintillation proportional chamber (or counter)                 | I <sup>2</sup> L | integrated injection logic                        |
| GTHTGR    | gas turbine HTGR  | I <sup>3</sup> L | isoplanar I <sup>2</sup> L                        |
| GTO       | gate turn-off or Gaussian-type orbitals                             | IAEA             | International Atomic Energy Authority Agency      |
| GUT       | grand unified theory  | IAR              | isobaric analogue resonance                       |
| GVB       | generalised valence bond  | IAS              | isobaric analogue state                           |
| HAM       | hydrogenic atoms in molecules                                       | IBA              | interacting boson approximation                   |
| HBAB      | hexyloxybenzylidene-p'-aminobenzo nitrile                           | IBFA             | interacting boson-fermion approximation           |
| HBT       | N-(p-hexyloxybenzylidene)-p-toluidene                               | IBM              | interacting boson model                           |
| HCDA      | hypothetical core disruptive accident                               | IBPBAC           | isobutyl-4-(4'-phenylbenzylidene-amino) cinnamate |
|           |   | IC               | integrated circuit                                |
|           |   | ICDF             | intermediate coupling Dirac-Fock                  |



|               |  |        |   |
|---------------|--|--------|---|
| ICF           | inertial confinement fusion                              | JINR   | Joint Institute for Nuclear Research                  |
| ICP           | inductively coupled plasma                               | JT-60  | Japanese Tokamak-60                                   |
| ICPP          | Idaho Chemical Processing Plant                          |        |   |
| ICRF          | ion cyclotron range of frequencies                       | KdV    | Korteweg-de Vries                                     |
| ICRH          | ion cyclotron resonance heating                          | KEK    | Japan National Laboratory for High Energy Physics     |
| IDT           | interdigital transducer                                  |        |   |
| IEPA          | independent electron pair approximation                  | KKR    | Korringa-Kohn-Rostoker                                |
| IETS          | inelastic electron tunnelling spectra- (oscopy)          | LAMPF  | Los Alamos Meson Physics Facility                     |
| IF            | intermediate frequency                                   | LAN    | local area network                                    |
| IFA           | ionisation front accelerator                             | LC     | inductance-capacitance                                |
| IGES          | initial graphics exchange specification                  | LCAO   | linear combination of atomic orbitals                 |
| IGFET         | insulated gate field effect transistor                   | LCBO   | linear combinations of (semi-localised) band orbitals |
| IGT           | insulated gate transistor                                | LCD    | liquid crystal display/device                         |
| IHEP          | Institute of High Energy Physics                         | LCGO   | linear combination of Gaussian orbitals               |
| IIR           | infinite impulse response                                | LCP    | Large Coil Program                                    |
| IKBS          | intelligent knowledge-based system                       | LCRO   | linear combination of Rydberg orbitals                |
| IKO           | Institute v. Kernph Ouder Amsterdam                      | LCTF   | Large Coil Test Facility                              |
| ILS           | instrument landing system                                | LDD    | lightly doped drain                                   |
| ILW           | intermediate level (radioactive) waste                   | LDPE   | low density polyethylene                              |
| IMPATT        | impact avalanche transit time                            | LEAR   | Low Energy Antiproton Ring                            |
| INDO          | intermediate neglect of differential overlap             | LEC    | liquid encapsulated Czochralski                       |
| INDOR         | internuclear double resonance                            | LED    | light emitting diode                                  |
| INEPT         | insensitive nuclei enhanced by polarisation transfer     | LEED   | low energy electron diffraction                       |
| ING           | intense neutron generator                                | LEFD   | Large Experimental Fusion Device                      |
| INO           | iterative natural orbital                                | LEP    | Large Electron Positron (CERN)                        |
| INS           | Information Network System or inertial navigation system | LET    | linear energy transfer                                |
| INTELSAT      | international telecommunications satellite consortium    | LEU    | low enrichment uranium (10% U235)                     |
| INTOR         | International Tokamak Reactor                            | LEU/Th | low enrichment U/Th fuel                              |
| IOC- $\omega$ | inclusion of the overlap charges in the omega            | LF     | low frequency   |
| IPSS          | international PSS  | LHRH   | lower hybrid resonance heating                        |
| IR            | infrared   | LIFO   | last in first out                                     |
| IRDO          | intermediate retention of differential overlap           | LIME   | laser induced magnetically enhanced                   |
| IREB          | intense relativistic electron beam                       | LLTR   | Large Leak Test Rig                                   |
| IRED          | infrared emitting diode                                  | LLW    | low level (radioactive) waste                         |
| IRS           | information retrieval system                             | LMC    | Large Magellanic Cloud                                |
| ISABELLE      | intersecting storage and acceleration                    | LMFBR  | liquid metal fast breeder reactor                     |
| ISDN          | integrated services digital network                      | LMS    | least mean square                                     |
| ISFET         | ion-sensitive field effect transistor                    | LMTO   | linear combination of muffin tin orbitals             |
| ISI           | intersymbol interference                                 | LNG    | liquified natural gas                                 |
| ISL           | integrated Schottky logic                                | LOCA   | loss of coolant accident                              |
| ISO           | International Standards Organization                     | LOCE   | loss of coolant experiment                            |
| ISR           | intersecting storage ring                                | LOCOS  | local oxidation of silicon                            |
| ISX           | impurity study experiment                                | LOF    | loss of flow  |
| IT            | information technology                                   | LOFT   | Loss of Flow Test Facility                            |
| ITC           | ionic thermocurrents                                     | LOFW   | loss of feed water                                    |
| ITEP          | Institute of Theoretical and Experimental Physics        | LP     | linear programming                                    |
| ITR           | Ignition Test Reactor                                    | LPC    | linear predictive coding                              |
| IU            | Indiana University                                       | LPCVD  | low pressure chemical vapour deposition               |
| IVO           | improved virtual orbitals                                | LPE    | liquid phase epitaxy                                  |
| JAERI         | Japan Atomic Energy Research Institute                   | LPFL   | low pinchoff-voltage FET logic                        |
| JET           | Joint European Torus                                     | LSA    | limited space charge accumulation                     |
| JFET          | junction field effect transistor                         | LSD    | local spin density or loop shut-down                  |
|               |  | LSI    | large-scale integration                               |
|               |  | LSPB   | Large Scale Prototype Breeder                         |
|               |  | LSTF   | Large Scale Test Facility                             |
|               |  | LTE    | local thermodynamic equilibrium                       |
|               |  | LUMO   | lowest unoccupied molecular orbitals                  |
|               |  | LV     | low voltage   |



|              |  |              |   |
|--------------|--|--------------|---|
| LWBR         | light water breeder reactor                                    | MOCIC        | molecular orbital constraint of interaction coordinates |
| LWHCR        | light water high convertor reactor                             | MOCVD        | metal-organic chemical vapour deposition                |
| LWR          | light water reactor  | MODFET       | modulation doped field effect transistor                |
| M1,M2        | magnetic dipole, quadrupole                                    | MODPOT       | model potential   |
| MADO         | Mulliken approximation for differential overlap                | MOS          | metal-oxide-semiconductor                               |
| MARS         | Mirror Advanced Reactor Study                                  | MOSFET       | metal-oxide-semiconductor field effect transistor       |
| MBBA         | 4-methoxybenzylidene-4'-n-butylaniline                         | MOST         | metal-oxide-semiconductor transistor                    |
| MBE          | molecular beam epitaxy   | MOVPE        | metal-organic vapour phase epitaxy                      |
| MBPT         | many body perturbation theory                                  | MOX          | mixed oxide fuel  |
| MCD          | magnetic circular dichroism                                    | MPH          | moving plasmoid heater                                  |
| MCFR         | magnetic confinement fusion reactor                            | MPSK         | multiple phase shift keying                             |
| MCP          | microchannel plate   | MQORC        | modified quadrature overlapped raised cosine            |
| MCPESCF      | multiconfiguration paired excitation SCF                       | MQW          | multiple quantum well                                   |
| MCSCF        | multiconfiguration self-consistent field                       | MRAC         | model reference adaptive control                        |
| MCVD         | modified chemical vapour deposition                            | MRD          | multi-reference double excitation                       |
| MCX $\alpha$ | multiconfiguration X $\alpha$                                  | MRINDO       | modified Rydberg INDO                                   |
| MCZDO        | multi-centre zero differential overlap                         | MRP          | materials requirements planning                         |
| MEC          | molecular electron correlation(s)                              | MRP II       | manufacturing resources planning                        |
| MEDO         | multipole expansion of diatomic overlap                        | MS           | management science                                      |
| MESFET       | metal-semiconductor field effect transistor                    | MSI          | medium scale integration                                |
| MEU          | medium enrichment uranium (20% U235)                           | MSK          | minimum shift keying                                    |
| MEU/Th       | medium enrichment U/Th fuel                                    | MSR          | molten salt reactor                                     |
| MF           | medium frequency   | MSSW         | magnetostatic surface wave                              |
| MFP          | mean free path   | MSU          | Michigan State University                               |
| MFR          | mirror fusion reactor  | MSW          | magnetostatic waves                                     |
| MFSK         | multiple frequency shift keying                                | MSX $\alpha$ | multiple scattering X alpha                             |
| MFTF         | Mirror Fusion Test Facility                                    | MTBF         | mean-time between failures                              |
| MHD          | magnetohydrodynamics   | MTF          | modulation transfer function                            |
| MIC          | microwave integrated circuit                                   | MTI          | moving target indicator                                 |
| MID          | magnetically insulated diode                                   | MTL          | merged-transistor logic                                 |
| MIDP         | microwave induced delayed phosphorescence                      | MTTF         | mean time to failure                                    |
| MIEHM        | modified iterative extended Huckel method                      | MTX $\alpha$ | muffin-tin X $\alpha$                                   |
| MIM          | metal-insulator-metal  | MUF          | material unaccounted for or                             |
| MIMD         | multiple input multiple data                                   | MWPC         | maximum usable frequency                                |
| MINDO        | modified incomplete neglect of differential overlap            | NAL          | multiwire proportional chamber                          |
| MIS          | metal-insulator-semiconductor or management information system | NAND         | National Accelerator Laboratory                         |
| MISFET       | metal-insulator-semiconductor field effect transistor          | NBETF        | not-and(logic)  |
| MIT          | Massachusetts Institute of Technology                          | NBI          | Neutral Beam Engineering Test Facility                  |
| MITATT       | mixed tunnelling avalanche transit time                        | NBPS         | neutral beam injection                                  |
| MLC          | multilayer ceramic   | NBS          | neutral beam power systems                              |
| MLS          | microwave landing system                                       | NC           | National Bureau of Standards                            |
| MLW          | medium level (radioactive) waste                               | NCBR         | numerical control                                       |
| MM           | millimetre   | NCMET        | nitride cooled breeder reactor                          |
| MMF          | magnetomotive force  | NDDO         | non-closed shell many electron theory                   |
| MMI          | man machine interface  | NDE          | neglect of diatomic differential overlap                |
| MMIC         | monolithic microwave integrated circuit                        | NDRO         | nondestructive evaluation                               |
| MNOS         | metal-nitride-oxide-semiconductor                              | NDT          | nondestructive readout                                  |
| MO           | molecular orbitals   | NEA          | nondestructive testing                                  |
|              |  | NEMO         | negative electron affinity                              |
|              |  | NET          | non-empirical molecular orbitals                        |
|              |  | NEVE         | Next European Tokamak                                   |
|              |  | NHS          | non-empirical valence-electron                          |
|              |  | NIC          | National Health Service                                 |
|              |  |              | negative impedance convertor                            |



|        |   |            |   |
|--------|---|------------|---|
| NMOS   | N-channel metal-oxide-semiconductor                             | PCILOCC    | perturbative configuration interaction using localised orbitals for crystal calculation |
| NMR    | nuclear magnetic resonance                                      | PCM        | pulse code modulation   |
| NMR-ON | NMR on oriented nuclei  | PCR/V      | prestressed concrete reactor vessel   |
| NNDO   | neglect of non-neighbour differential overlap                   | PCV        | primary containment vessel  |
| NOR    | not-or(logic)   | PCX        | plasma confinement experiment   |
| NPL    | National Physical Laboratory                                    | PDE        | partial differential equation   |
| NQR    | nuclear quadrupole resonance                                    | PDX        | Poloidal Divertor Experiment  |
| NRC    | Nuclear Regulatory Commission                                   | PEM        | photoelectromagnetic  |
| NRM    | natural remanent magnetisation                                  | PEP        | Positron Electron Proton (Stanford)   |
| NSRR   | Nuclear Safety Research Reactor                                 | PET        | polyethylene terephthalate  |
| NSSS   | nuclear steam supply system                                     | PETRA      | Positron Electron Tandem  |
| NTL    | nonthreshold logic  |            | Ringbeschleuniger Anlage  |
| NTO    | natural transition orbitals                                     | PF         | poloidal field or power factor  |
| NTSC   | National TV Standards Committee                                 | PFM        | pulse frequency modulation  |
| NWPA   | Nuclear Waste Policy Act  | PFR        | Prototype Fast Reactor  |
|        |   | PHWR       | pressurised heavy water reactor   |
| OA     | office automation   | PID(PI,PD) | proportional+integral+differential (derivative)   |
| OCR    | optical character recognition                                   |            |   |
| ODE    | ordinary differential equation                                  | PIPECO     | photoion photoelectron coincidence  |
| ODMR   | optical detection of magnetic resonance                         | PIUS       | process inherent ultimately safe  |
|        |   | PIXE       | proton induced X-ray emission   |
| OEIC   | optoelectronic integrated circuit                               | PLA        | phase locked arrays or programmable logic array   |
| OEM    | original equipment manufacture                                  |            |   |
| OER    | oxygen enhancement ratio  | PLBR       | Prototype Large Breeder Reactor   |
| OH     | ohmic heating   | PLC        | programmable logic control  |
| OHTE   | Ohmically Heated Toroidal Experiment                            | PLL        | phase locked loops  |
|        |   | PLT        | Princeton Large Torus   |
| OPHF   | orbital polarised Hartree-Fock                                  | PM         | pulse modulation or phase modulation  |
| OPW    | orthogonal plane wave   |            |   |
| OQPSK  | offset quadrature phase shift keying                            | PMMA       | polymethylmethacrylate  |
| OR     | operations research   | PMDR       | phosphorescence microwave double resonance  |
| ORELA  | Oak Ridge Electron Linear Accelerator                           | PMOS       | P-channel metal-oxide-semiconductor   |
| ORNL   | Oak Ridge National Laboratory                                   |            |   |
| OS     | operating system  | PMR        | proton magnetic resonance   |
| OSI    | open systems interconnection                                    | PNDO       | partial neglect of differential overlap   |
| OTDR   | optical time domain reflectometry                               | PNO-CI     | pair natural orbital configuration interaction  |
| OTEC   | ocean thermal energy conversion                                 |            |   |
| OTF    | optical transfer function                                       | PNS        | Pulsed Neutron Source   |
| OTS    | Orbital Test Satellite  | POL        | pair orthogonalised Lowdin  |
| OTSG   | once through steam generator                                    | POPAE      | protons on protons and electrons  |
| OZI    | Okubo-Zweig-lizuha (quark model)                                | POPOP      | phenyl-oxazolyl-phenyl-oxazolyl-phenyl  |
|        |   |            |   |
| PAA    | paraazoxyanisole  | PORV       | power operated relief valve   |
| PABX   | private automatic branch exchange                               | POS        | point of sale   |
| PAC    | perturbed angular correlation                                   | PPDP/S     | Pariser-Parr-Del Bene-Pople/Segal calculations  |
| PAHR   | post accident heat removal                                      |            |   |
| PAL    | programmable array logic  | PPI        | plan position indicator   |
| PAM    | pulse amplitude modulation                                      | PPM        | pulse position modulation or parts per million  |
| PAP    | paraazoxyphenetole  |            |   |
| PBF    | power bursts facility   | PPP        | Pariser-Parr-Pople  |
| PBFA   | Particle Beam Fusion Accelerator                                | PRA        | probabilistic risk assessment   |
| PBR    | pebble bed reactor  | PRDDO      | partial retention of diatomic differential overlap                                      |
| PBT    | permeable base transistor                                       |            |   |
| PBX    | private branch exchange   | PREPP      | Process Experimental Pilot Plant  |
| PC     | printed circuit or personal computer or programmable controller | PRF        | pulse recurrence (repetition) frequency   |
| PCAC   | partially conserved axial currents                              | PROM       | programmable read-only-memory or Pockels readout optical modulator                      |
| PCB    | printed circuit board   |            |   |
| PCES   | phase change energy storage                                     | PS         | proton synchrotron (CERN)   |
| PCGVB  | pairwise correlated generalised valence bond                    | PSD        | power shut-down or power spectral density   |



|        |  |        |  |
|--------|--|--------|--|
| PSDN   | packet switched data network                         | RPAE   | random phase approximation with exchange                       |
| PSK    | phase shift keying                                   | RPM    | relaxation potential model or revolutions per minute           |
| PSS    | packet switching service or Packet SwitchStream      | RPV    | reactor pressure vessel  |
| PSTN   | public switched telephone network                    | RTG    | radioisotope thermoelectric generators                         |
| PSU    | power supply unit                                    | RTL    | resistor-transistor logic                                      |
| PTFE   | polytetrafluoroethylene                              | RTTY   | radio teletypewriter   |
| PTM    | pulse time modulation                                |        |  |
| PVC    | polyvinyl chloride                                   |        |  |
| PVD    | physical vapour deposition                           |        |  |
| PWA    | partial wave analysis                                |        |  |
| PWB    | printed wiring board                                 | S/N    | signal-to-noise  |
| PWBA   | plane wave Born approximation                        | SACCI  | symmetry adapted cluster configuration interaction             |
| PWIA   | plane wave impulse approximation                     | SAINT  | self-aligned implantation for N <sup>+</sup> -layer technology |
| PWM    | pulse width modulation                               | SAMO   | simulated ab initio molecular orbitals                         |
| PWR    | pressurised water reactor                            | SAMOS  | stacked gate avalanche injection metal-oxide-semiconductor     |
| QA     | quality assurance                                    | SAN    | small area network   |
| QAM    | quadrature amplitude modulation                      | SAR    | synthetic aperture radar                                       |
| QASK   | quadrature amplitude shift keying                    | SAW    | surface acoustic waves   |
| QC     | quality control                                      | SAXS   | small-angle X-ray scattering                                   |
| QCD    | quantum chromodynamics                               | SCC    | stress corrosion cracking                                      |
| QDMBPT | quasi-degenerate many-body perturbation theory       | SCF    | self-consistent field  |
| QED    | quantum electrodynamics                              | SCFL   | source-coupled FET logic                                       |
| QFSK   | quadrature frequency shift keying                    | SCH    | separate confinement heterostructure                           |
| QORC   | quadrature overlapped raised cosine                  | SCL    | space charge limited   |
| QOSRC  | quadrature overlapped squared raised cosine          | SCPC   | single channel per carrier                                     |
| QPM    | quark-parton model                                   | SCPT   | self-consistent perturbation theory                            |
| QPR    | quadrature partial response                          | SCR    | silicon controlled rectifier                                   |
| QPSK   | quaternary phase shift keying                        | SCTF   | Slab Core Test Facility  |
| R & D  | research and development                             | SDFL   | Schottky-diode FET logic                                       |
| RAD    | ribbon-against-drop                                  | SDLC   | synchronous data link control                                  |
| RAM    | random access memory                                 | SDM    | space division multiplexing                                    |
| RBE    | relative biological effectiveness                    | SDMA   | space division multiple access                                 |
| RBS    | Rutherford backscattering                            | SDO    | shielded diatomic orbitals                                     |
| RC     | resistance-capacitance                               | SED    | stochastic electrodynamics                                     |
| RCIC   | reactor core isolation cooling                       | SEHF   | spin extended Hartree-Fock                                     |
| RCNDO  | Rydberg CNDO   | SEM    | scanning electron microscopy                                   |
| RCS    | rapid cycling synchrotron or reactor coolant systems | SERS   | surface enhanced Raman scattering                              |
| RCTL   | resistor-capacitor-transistor logic                  | SEXAFS | surface extended X-ray absorption fine structure               |
| REA    | rod ejection accident                                | SFE    | solar-flare effect   |
| RF     | radio frequency                                      | SFL    | substrate fed logic  |
| RFI    | radio frequency interference                         | SGEMP  | system generated electromagnetic pulse                         |
| RFPR   | reversed field pinch reactor                         | SGHWR  | steam generating heavy water reactor                           |
| RFX    | Reversed Field (Pinch) Experiment                    | SHF    | superhigh frequency  |
| RG     | renormalisation group                                | SHG    | second harmonic generation                                     |
| RGB    | red green blue                                       | SICOS  | sidewall base contact structure                                |
| RHEED  | reflection high energy electron diffraction          | SIL    | single-in-line   |
| RHF    | restricted Hartree-Fock                              | SIMD   | single instruction multiple data                               |
| RIA    | reactivity initiated accident                        | SIMOS  | stacked-gate injection metal-oxide-semiconductor               |
| RIE    | reactive ion etching                                 | SIMOX  | separation by implantation of oxygen                           |
| RINDO  | Rydberg INDO   | SIMS   | secondary ion mass spectra(oscopy)                             |
| RISC   | reduced instruction set computer                     | SIN    | Swiss Institute of Nuclear Research                            |
| RKKY   | Rudermann-Kittel-Kasuya-Yosida                       | SINDO  | scaled INDO  |
| RLC    | resistance-inductance-capacitance                    | SIPOS  | semi-insulating polycrystalline silicon                        |
| RMS    | root-mean-square                                     | SIS    | semiconductor-insulator-semiconductor                          |
| RNA    | ribonucleic acid                                     | SISAM  | spectrometer with interference                                 |
| ROM    | read-only memory                                     |        | selective amplitude modulation                                 |
| RPA    | random phase approximation                           |        |  |

|         |   |          |  |
|---------|---|----------|--|
| SIT     | static induction transistor   | SURMAC   | surface magnetic confinement                                   |
| SLC     | Stanford Linear Collider  | SUSY GUT | supersymmetric grand unified theory                            |
| SLIC    | subscriber line interface circuit   | SW       | short wave   |
| SLSF    | Sodium Loop Safety Facility   | SWEPP    | Stored Waste Examination Pilot Plant                           |
| SMA     | surface mount(ed) assembly  | SWR      | sodium water reactor or standing wave ratio                    |
| SMD     | surface mount(ed) component   | SXAPS    | soft X-ray appearance potential spectra(oscopy)                |
| SMES    | superconductive magnetic energy storage                                   | TAB      | tape automated bonding   |
| SMQORC  | staggered modified quadrature overlapped raised cosine                    | TASI     | time assignment speech interpolation                           |
| SMT     | surface mount(ed) technology  | TAT      | transatlantic telephone cable                                  |
| SNA     | Systems Network Architecture  | TBBA     | terephthal-butylaniline  |
| SNM     | special nuclear material  | TCNE     | tetracyanoethylene   |
| SNR     | signal to noise ratio or supernova remnant                                | TCNQ     | tetracyanoquinodimethane                                       |
| SNS     | superconducting normal superconducting or Spallation Neutron Source       | TCR      | temperature coefficient of resistance                          |
| SOG     | strongly orthogonal geminal   | TCXO     | temperature compensated crystal oscillator                     |
| SOI     | silicon on insulator  | TDHF     | time-dependent Hartree-Fock                                    |
| SOS     | silicon on sapphire   | TDF      | Technology Demonstration Facility or transborder data flow     |
| SPA     | separated pair approximation  | TDM      | time division multiplex(ing)                                   |
| SPC     | stored program control  | TDMA     | time division multiple access                                  |
| SPCP    | single parity check product (code)  | TDMF     | time dependent mean field theory                               |
| SPEAR   | Stanford Positron Electron Asymmetric Ring                                | TDPAC    | time differential perturbed angular correlation                |
| SPHF    | spin polarised Hartree-Fock   | TDS      | thermal desorption spectra(oscopy)                             |
| SPS     | Super Proton Synchrotron (CERN)   | TE       | transverse electric  |
| SQAM    | superposed quadrature amplitude modulation                                | TEA      | transversely excited atmosphere                                |
| SQPR    | staggered quadrature partial response                                     | TEGFET   | two-dimensional electron gas field effect transistor           |
| SQPSK   | staggered quadrature phase shift keying                                   | TEM      | transverse electromagnetic or transmission electron microscopy |
| SQUID   | superconducting quantum interference device                               | TEXT     | Texas Experimental Tokamak                                     |
| SRAM    | static random access memory   | TF       | toroidal field   |
| SREMP   | source region electromagnetic pulse                                       | TFCX     | Toroidal Fusion Core Experiment                                |
| SRMCASE | symmetry-restricted-multiconfiguration annihilation of single excitations | TFT      | thin film transistor   |
| SRV     | safety release valve  | TFTR     | Tokamak Fusion Test Reactor                                    |
| SS-TDMA | satellite switched time division multiple access                          | TGA      | thermogravimetric analysis                                     |
| SSB     | single sideband   | TGFB     | triglycine fluoroberyllate                                     |
| SSBW    | surface skimming bulk wave  | TGS      | triglycine sulphate  |
| SSC     | sudden storm commencement or Superconducting Super Collider               | TGSe     | triglycine selenate  |
| SSCR    | spectrum shift controlled reactor   | THORS    | Thermal-Hydraulic Out-of-Reactor Safety Facility               |
| SSFL    | Schottky-barrier coupled Schottky-barrier gate FET logic                  | THTF     | Thermal Hydraulic Test Facility                                |
| SSI     | small scale integration   | TJS      | transverse junction stripe                                     |
| SSMA    | spread spectrum multiple access   | TLD      | thermoluminescent dosimeter(-ry)                               |
| SST     | supersonic transport  | TM       | transverse magnetic  |
| STD     | salinity-temperature-depth or subscriber trunk dialling                   | TMC      | Test Module Coil   |
| STEC    | solar thermal energy conversion   | TMHR     | tandem mirror hybrid reactor                                   |
| STEM    | scanning transmission electron microscopy                                 | TMI      | Three Mile Island  |
| STL     | Schottky transistor logic   | TMMC     | tetramethylammonium manganese chloride                         |
| STO     | Slater-type orbitals  | TMR      | tandem mirror reactor  |
| STOL    | short take-off and landing  | TMTSeF   | tetramethyltetraselenafulvalene (-inium)                       |
| STP     | Slater-transfer Preuss  | TMTTF    | tetramethyltetrathiofulvalene(-inium)                          |
|         |   | TMX-U    | Tandem Mirror Experiment-Upgrade                               |
|         |   | TNS      | The Next Step  |
|         |   | TOF      | time-of-flight   |
|         |   | TOP      | transient overpower accident                                   |
|         |   | TPC      | time projection chamber  |
|         |   | TPD      | temperature programmed desorption                              |
|         |   | TPTF     | Two-Phase Flow Test Facility                                   |



|                         |   |       |   |
|-------------------------|---|-------|---|
| TRAPATT                 | trapped plasma avalanche triggered transit                                | VCR   | video cassette recorder                             |
| TREAT                   | Transient Reactor Test Facility   | VDM   | vector dominance model                              |
| TRM                     | thermoremanent magnetisation  | VDT   | visual display terminal                             |
| TRRR (TR <sup>3</sup> ) | time resolved resonant Raman (spectra (-oscopy))                          | VDU   | visual display unit                                 |
| TRU                     | transuranic (waste)   | VDW   | van der Waals                                       |
| TSC                     | thermally stimulated currents   | VFO   | variable frequency oscillator                       |
| TSD                     | thermally stimulated desorption   | VHF   | very high frequency                                 |
| TSEE                    | thermally stimulated exo-electron emission                                | VHSIC | very high speed integrated circuit                  |
| TSIC                    | thermally stimulated ionic currents                                       | VJFET | vertical junction field effect transistor           |
| TSTA                    | Tritium Systems Test Facility   | VLBI  | very long base line interferometry                  |
| TSeF                    | tetraselenafulvalene(-inium)  | VLF   | very low frequency                                  |
| TSeT                    | tetraselenatetetracene  | VLSI  | very large scale integration                        |
| TTF                     | tetrathiofulvalene(-inium)  | VM    | virtual machine                                     |
| TTL                     | transistor transistor logic   | VMOS  | vertical channel metal-oxide-semiconductor          |
| TTMP                    | transit time magnetic pumping   | VOR   | VHF omnidirectional range                           |
| TTT                     | tetrathiotetracene  | VPE   | vapour phase epitaxy                                |
| TUCA                    | transient undercooling accident   | VRC   | visual record computer                              |
| TUCOP                   | transient undercooled overpower accident                                  | VRDDO | variable retention of diatomic differential         |
| TV                      | television  | VS    | virtual storage                                     |
| TVRO                    | TV receive only   | VSB   | vestigial sideband                                  |
| TW                      | travelling wave   | VSEPR | valence shell electron pair repulsion               |
| TWT                     | travelling wave tube  | VSWR  | voltage standing wave ratio                         |
|                         |   | VTOL  | vertical take-off and landing                       |
|                         |   | VTR   | voltage transformation ratio or video tape recorder |
| UART                    | universal asynchronous receiver transmitter                               | VUV   | vacuum ultraviolet                                  |
| UCHF                    | uncoupled Hartree-Fock  | VVER  | water moderated water cooled reactors               |
| UCN                     | ultra cold neutrons   | VVVF  | variable voltage variable frequency                 |
| UHF                     | ultra high frequency or unrestricted Hartree-Fock                         |       |   |
| UHPS                    | underground hydroelectric pumped storage                                  | WAN   | wide area network                                   |
| UHV                     | ultra high voltage  | WARC  | World Administrative Radio Conference               |
| UJT                     | unijunction transistor  | WAXS  | wide-angle X-ray scattering                         |
| UKAEA                   | United Kingdom Atomic Energy Authority                                    | WDM   | wavelength division multiplex(ing)                  |
| ULA                     | uncommitted logic array   | WIPP  | Waste Isolation Pilot Plant                         |
| ULF                     | ultra low frequency   | WKB   | Wentzel-Kramers-Brillouin                           |
| ULSI                    | ultra-large scale integration   | WP    | word processing                                     |
| UMD                     | unitised microwave devices  | WWER  | water moderated water cooled reactors               |
| UPS                     | ultraviolet photoelectron spectra(oscopy) or uninterruptible power supply |       |   |
| US                      | ultrasonic  | XANES | X-ray absorption near edge structure                |
| USART                   | universal synchronous/asynchronous receiver transmitter                   | XLPE  | cross-linked polyethylene                           |
| UUT                     | unit under test   | XOR   | exclusive-OR  |
| UV                      | ultraviolet   | XPD   | cross-polarisation discrimination                   |
|                         |   | XPS   | X-ray photoelectron spectra(oscopy)                 |
|                         |   | XUV   | X-ray-ultraviolet                                   |
| VAD                     | vapour phase axial deposition   |       |   |
| VAN(S)                  | value added network (services)  | ZEBRA | Zero Energy Breeder Reactor Assembly                |
| VB                      | valence bond  | ZGS   | zero gradient synchrotron                           |
| VCO                     | voltage controlled oscillator   | ZPPR  | zero power plutonium reactor                        |
|                         |   | ZTP   | Z toroidal pinch                                    |



# Subject Index

**M-centre lasers** *see colour centre lasers*

## M-centres

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## Mach number

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**magnetic field effects**

*see also* biomagnetism; galvanomagnetic effects; magnetic levitation; magnetic properties of substances; magnetic separation; magneto-optical effects; magnetoacoustic effects; magnetocaloric effects; magnetoelectric

**magnetic field effects** continued

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**NMOS integrated circuits** *see field effect integrated circuits*

**NMOS transistors** *see insulated gate field effect transistors*

**NMR** *see nuclear magnetic resonance*

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**NMR spin echo** *see spin echo (NMR)*

## nobelium

No entries

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No entries

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## noise

*see also acoustic noise; atmospheric; electron device noise; interference; random noise; white noise*

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**optical polarimetry** *see polarimetry*

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**paramagnetic resonance of iron group ions and impurities**

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rare earth metals

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**rigidity** *see shear modulus*

**rimming steel** *see steel*

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**ringers** *see bells*

**riometers** *see ionospheric measuring apparatus*

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**spontaneous symmetry breaking continued**

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**SREMP** see *electromagnetic pulse*

**stabilisation** see *stability*

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**stability**

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**surface magnetism** *see magnetic surface phenomena*

**surface-molecular beam collisions** *see molecule-surface impact*

**surface mount technology** *see integrated circuit technology; packaging; printed circuits*

**surface phenomena**

*see also surface.....*

*see also atom-surface impact; capillarity; crazing; crystal surface and interface vibrations; emissivity; field evaporation; interface phenomena; ion-surface impact; magnetic surface phenomena; molecule-surface impact; sorption; surface acoustic waves*  
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**surface plasmons**

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tenacity *see* tensile strength

### tensile strength

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**time measurement**

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# torquemeters

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*see also speech synthesis*

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